

**REMARKS**

Claims 1-6 are pending in the application. Applicant herein amends claims 1 and 4. Support for the added features is found in Figures 1 and 3, respectively, of the drawings. No new matter has been added.

**I. Claim Rejections - 35 U.S.C. § 103**

The Examiner rejected claims 1, 2, 4, and 5 under 35 U.S.C. 103(a) as allegedly being unpatentable over Sato (U.S. 6,343,198) in view of Endo (U.S. Appln. 2002/0085849).

A. Claims 1, 2, 4 and 5

The Examiner deemed the positioning of the image density detecting means in claims 1 and 4, which is not taught by Sato, Endo nor Kusaba, as being “non-critical” and not being fully disclosed in the specification prior to the claims. Applicant traverses.

Herein amended claim 1 requires:

an image density detecting means which is arranged to face said intermediate transfer belt; and

a locking means, disposed on the side of said driven roller, for locking said support frame to the housing body;

wherein said support frame is attached to the housing body such that the support frame is detachable relative to the housing body by means of pivotal movement; and

*wherein said image density detecting means is connected to the support frame, in proximity to said locking means.*

Herein amended claim 4 requires:

wherein said support frame is attached to the housing body such that the support frame is detachable relative to the housing body by means of pivotal movement; and

*wherein said image density detecting means is connected to the support frame, in proximity to said driving roller which is near the pivot of said support frame.*

*In re Cole*, 140 USPQ 230 (CCPA 1964) found that “the criticality of such a limitation must be disclosed in the specification or by affidavit.” Applicant submits that the criticality of the limitations in question were disclosed in the originally filed specification.

In the background of the invention, Applicant points to a problem associated with maintenance, which is, when the transfer belt is replaced the position of the image detecting means may be shifted, thus deteriorating the detecting accuracy. (Specification, page 5, lines 13-19). It is an object of Applicant’s present invention to solve the aforementioned problem, as seen below:

there is a problem that the position of the image density detecting means may be shifted when the transfer belt is returned to its original position by pivotal movement, with the result that the distance between the image density detecting means and the transfer belt is changed, thus deteriorating the detecting accuracy.

It is an object of the present invention to provide an image forming apparatus which can solve the aforementioned conventional problems and which is detachable by pivotal movement relative to a housing body and can prevent the deterioration in detecting accuracy of the image density detecting means.

(Specification, page 5, lines 13-25.)

The combined references do not teach a solution to this problem, associated with maintenance, when the image forming apparatus is opened for diagnosis and then closed after the correction is made.

The criticality of the limitations in claims 1 and 4, as required by *In re Cole*, is fully disclosed in the specification as follows:

That is, in the image forming apparatus in which the intermediate transfer belt 16 is arranged such that the intermediate transfer belt 16 is pivotally movable relative to the housing body 2 about the pivot shaft 2b of the support frame 9a, the image density detecting means 18 is disposed in proximity to the lock lever 9c so that the image density detecting means 18 is reliably positioned by the lock of the lock lever 9c, thereby preventing the deterioration of the detecting accuracy.

(Specification, page 13, lines 13-21.)

In other words, positioning the image density detecting means near the pivot shaft 2b or the lock lever 9c ensures that the image density detecting means 18 produces accurate measurements and prevents problems caused by misalignment. Applicant agrees with the Examiner that the limitation regarding the positioning of the image detecting means is not taught in the combined references and further, and Applicant respectfully contends that the *In re Cole* criticality requirement of the limitation is fully disclosed in the specification. Moreover, to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 the Examiner must show that the prior art references, when combined, teach or suggest all of the claim limitations. See MPEP § 2143. As a result, in order for the Examiner to maintain a rejection under 35 U.S.C. § 103, the references must teach all of the limitations of the claims. Since all the features of claims 1 and 4 are not taught in Sato and Endo, claims 1 and 4 are patentable.

Further, regarding independent claim 1, Sato and Endo fail to teach or suggest “a locking means, disposed on the side of said driven roller, for locking said support frame to the housing body”. Sato and Endo both fail to teach or suggest this positioning, as disclosed in claim 1.

Further, regarding independent claim 4, Sato and Endo fail to teach or suggest “wherein said image density detecting means is connected to the support frame, in proximity to said driving roller which is near the pivot of said support frame”. Sato and Endo both fail to teach or suggest this positioning, as disclosed in claim 4.

Applicant respectfully submits that the references applied above by the Examiner fail to teach or suggest all of the claim limitations as set forth in the present invention; Applicant contends that the criticality requirement of *In re Cole* is fulfilled; and Applicant respectfully requests that the Examiner withdraw this rejection of independent claims 1 and 4 along with their dependent claims 2 and 5, respectively.

B. Claims 3 and 6

The Examiner rejected claims 3 and 6 under 35 U.S.C. 103(a) as allegedly being unpatentable over Sato in view of Endo as applied to claims 1, 2, 4, 5, above, and further in view of Kusaba (US Appln. 2002/0090234).

AMENDMENT UNDER 37 C.F.R. § 1.116  
U.S. Application No. 10/625,907

Attorney Docket No. Q76663

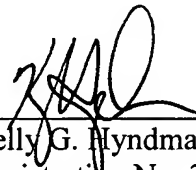
Kusaba does not compensate for the deficiencies of Sato and Endo as it relates to base claims 1 and 4. Therefore, claims 3 and 6 are allowable by their dependency, and Applicant respectfully requests the Examiner to withdraw this rejection of claims 3 and 6.

## **II. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Kelly G. Hyndman  
Registration No. 39,234

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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